
GOVERNMENT NOTICE

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

No. 251

5 March 2009



SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Forestry

registered by Organising Field 01 – Agriculture and Nature Conservation, publishes the following Qualifications and Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Qualifications and Unit Standards. The full Qualifications and Unit Standards can be accessed via the SAQA web-site at www.saga.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Qualifications and Unit Standards should reach SAQA at the address below and **no later than 6 April 2009**. All correspondence should be marked **Standards Setting – SGB for Forestry** and addressed to

The Director: Standards Setting and Development
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D. MPHUTHING

ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
General Education and Training Certificate: Lumber Milling

SAQA QUAL ID		QUALIFICATION TITLE	
66269		General Education and Training Certificate: Lumber Milling	
ORIGINATOR		PROVIDER	
SGB Forestry			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	1 - Agriculture and Nature Conservation	Forestry and Wood Technology	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	123	Level 1	Regular-Unit Stds Based

This qualification does not replace any other qualification and is not replaced by another qualification.

PURPOSE AND RATIONALE OF THE QUALIFICATION**Purpose:**

The purpose of this Qualification is to provide the skills required in order for the learners to be able to perform elementary work in the Lumber Mill Industry, within their area of work. The learner will acquire knowledge and skills to:

- > Describe the Lumber Milling Industry in terms of processes and equipment making use of correct terminology.
- > Perform elementary Lumber Milling Operations under supervision.
- > Apply mathematical concepts when performing elementary tasks.
- > Identify the mechanical make-up and the function of elementary equipment needed in area of work.
- > Operate basic equipment safely in line with area of specialisation.
- > Apply lubrication as a maintenance requirement with the Lumber Milling industry.
- > Demonstrate knowledge pertaining to basic health and safety principles in and around a workplace.
- > Adhere to safety, health and environmental requirements in the workplace.
- > Conduct maintenance operation on the machine.
- > Participate as a member of a team.

Rationale:

South African lumber millers depend on the skills level of its workers for the production of high quality products. These product are expected to match up to the set standards and specifications of the industry which includes: SABS, SAWPA and SANS. Failure to comply with the set standards could result in some of the plants' and sites' closure. To offset this, an increased demand for more knowledgeable and better skilled personnel to produce millers has been identified within the sector. This qualification will allow workers at the lower levels an opportunity to gain skills and knowledge appropriate for their areas of work.

The typical range of learners is the currently employed, unemployed and other persons, who want to enter a learning programme to obtain a General Education and Training Certificate in Lumber Milling at NQF Level 1, to continue building a career path in this industry.

These learners, once qualified, will be able to effectively and efficiently work as supervisors or foremen, on tasks they are responsible for at this level in the relevant workplace.

This qualification equips learners with identified competencies, knowledge and skills at NQF Level 1 and also provide a basis for further learning at NQF Level 2. The exit level outcomes, which embody these competencies in knowledge and skills, are listed in paragraph 8 below. The fundamental outcomes as well as the non-industry specific core outcomes required at this level, also provide the learner with building blocks for a learning pathway outside this industry.

The learning programme, which leads to this qualification, produces a person who is knowledgeable about and appropriately skilled in performing the relevant tasks in Lumber Milling. Persons without any training or with another type of training, or persons, who had undergone the ad-hoc type of training which was prevalent under the previous dispensation, will not be of the same quality for this work than a learner with this qualification.

Improved levels of knowledge and skills lead to greater ability to produce at more competitive costs and better quality, increased sales, greater profits, more personal income, which will impact favourably both on the society and the economy of the country.

This qualification supports the National Qualifications Framework regarding access, mobility and progression, quality of learning, redress of unfair discrimination and contribution to personal development and social and economic development of the nation.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED IN PLACE

It is assumed that learners are competent in Communication and Literacy Skills at ABET Level 3 or equivalent.

Recognition of Prior Learning:

This qualification may be achieved in part or wholly through recognition of prior learning (RPL) processes.

The provision that the qualification may be obtained through the recognition of prior learning facilitates access to an education, training and career path in engineering and thus accelerates the redress of past unfair discrimination in education, training and employment opportunities.

Evidence of prior learning must be assessed through formal RPL processes through recognized methods. Any other evidence of prior learning should be assessed through formal RPL processes to recognize achievement thereof.

Learners submitting themselves for RPL should be thoroughly briefed prior to the assessment and will be required to submit a Portfolio of Evidence (PoE) in the prescribed format to be assessed for formal recognition. While this is primarily a workplace-based qualification, evidence from other areas of learning may be introduced if pertinent to any of the Exit Level Outcomes (ELOs).

The structure of this unit standard based qualification makes the RPL possible, if the learner is able to demonstrate competence in the knowledge, skills, values and attitudes implicit in this qualification.

Learners who already work in the Lumber Milling industry who believe they possess competencies to enable them to meet some or all of the ELOs listed in the qualification will be able to present themselves for assessment against those of their choice.

Access to the Qualification:

Access to this qualification is open.

QUALIFICATION RULES

This Qualification consists of Fundamental, Core and Elective Unit Standards. A minimum of 123 credits is required to achieve this Qualification.

The credits are allocated as follows:

Fundamental Component:

> Language, Literacy and Communication (LLC) Unit Standards, totalling 23 credits. All the credits are compulsory for all the learners.

A choice of either:

> Mathematical Literacy Unit Standards, totalling 16 credits.

Or

> Mathematics and Mathematical Sciences, totalling 16 credits.

A learner must choose Mathematical Literacy or Mathematics and not a combination of both.

Learners must complete all the LLC Unit Standards, totalling 23 credits and either Mathematical Literacy Unit Standards or the Mathematical Sciences Unit Standards, totalling 16 credits to give a total of 39 credits for the Fundamental Component.

Learning Area: Language, Literacy and Communication (LLC):

ID Number; Unit Standard Title; Credits:

- > ID 119635; Engage in a range of speaking/signing and listening interactions for a variety of purposes; 6 credits.
- > ID 119631; Explore and use a variety of strategies to learn; 5 credits.
- > ID 119640; Read/view and respond to a range of text types; 6 credits.
- > ID 119636; Write/Sign for a variety of different purposes; 6 credits.

Total = 23 credits.

And

Learning Area: Mathematical Literacy (ML):

ID Number; Unit Standard Title; Credits:

- ID 119373; Describe and represent objects in terms of shape, space and measurement; 5 credits
- ID 119364; Evaluate and solve data handling and probability problems within given contexts; 5 credits.

ID 119362; Work with numbers, operations with numbers and relationships between numbers; 4 credits.

ID 7450; Work with measurements in a variety of contexts; 6 credits.

Total = 16 credits.

Or

Learning Area: Mathematics and Mathematical Sciences (MMS):

ID Number; Unit Standard Title; Credits:

ID 7448; Work with patterns in various contexts; 4 credits.

ID 7452; Describe, represent and interpret mathematical modes in different contexts; 6 credits.

ID 7453; Use algebraic notations, conventions and terminology to solve problems, 3 credits.

ID 7464; Analyse cultural products and processes as representations of shape, space and time; 2 credits.

Total = 16 credits.

Core Component:

All the 8 core unit standards totalling 44 credits are compulsory.

Elective Component:

There are four elective pathways; Lumber Drying; Dry Lumber processing; Saw Doctoring and Green Timber processing.

Note:

> Each of the specialization areas has a different number of credits. The minimum number of elective credits is 40. Therefore the balance of credits required to achieve this qualification must be selected from any of the other elective pathways.

Specialisation path 1: Lumber Drying with 3 Unit Standards titles below:

> ID 263689: Stack lumber for kiln drying.

> ID 263699: Move kiln trolley with load of dried lumber from drying kiln run to cooling shed/facilities.

> ID 263674: Describe drying defects that can occur in wood and methods and techniques to minimize them.

Specialisation path 2: Dry Lumber processing with 4 Unit Standards titles below:

> ID 263676: Prepare and load lumber for drying in the kilns according to prescribed procedure.

> ID 263681: Handle, mix and apply adhesive glue manually in finger jointing and laminating facilities of lumber milling.

Specialisation Area 3: Saw Doctoring with 5 Unit Standards titles below:

> ID 263695: Perform routine maintenance on saw shop machine and tools.

> ID 263655: Move and transport saws and cutters between saw shop and processing machines.

> ID 263654: Clean saws and cutters returned for maintenance in saw shop.

- > ID 263682: Inspect used saw blades before and after servicing in Saw Shop of Lumber Mill.
- > ID 263678: Manually set and sharpen springset saw blades used in Lumber Mill.

Specialisation Area 4: Green Timber Processing with 1 Unit Standard with title below:

- > ID 263690: Operate Log Yard in a Lumber Mill.

EXIT LEVEL OUTCOMES

1. Demonstrate comprehensive knowledge of Lumber Milling Operations with respect to any of the four sub-disciplines of Lumber Milling Technology.

> Range: Lumber Milling Industry: Lumber drying, green timber processing, dry lumber processing, saw doctoring.

2. Perform elementary Lumber Milling operations under supervision (cross-cut machine, conveyor belt, strapping machine).

3. Adhere to Occupational Health, Safety and Environmental standards in the workplace.

4. Apply basic quality control measures as per Lumber Milling Industry standards.

5. Identify, gather and operate basic equipment safely.

Critical Cross-Field Outcomes have been addressed in the exit level outcomes as follows:

Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made when:

- > Identifying potential risks in the workplace and implementing appropriate solutions to maintain a safe and secure working environment.
- > Identifying and pro-actively reporting on non-availability of resources and materials.

Working effectively with others as a member of a group, organisation and community during:

- > Communicating and receiving advice from supervisors.

Organising and managing oneself and one's activities responsibly and effectively when:

- > Identifying, minimizing and reporting potential occupational health and safety hazards and risks in the workplace.
- > Performing work activities in accordance with industry standard operating procedures.
- > Safety equipment and clothing is selected and prepared in accordance with legislative requirements.

Collecting, analysing, organising and critically evaluating information to better understand and explain by:

- > Carrying out written instructions issued by supervisors, correctly and efficiently.
- > Interpreting and recording correct client contact details.

Communicating effectively using visual, mathematical and/or language skills in the modes of oral and/or written persuasion when:

- > Issuing clear verbal instructions to team members, other colleagues and clients.
- > Actively listening to feedback received from team members, other colleagues and clients.
- > Evaluating and reporting problem situations to team members, other colleagues and clients.

Using science and technology effectively and critically, showing responsibility towards the environment and health of others when:

- > Interpret various gauge settings, readings and recording the impact on the business.
- > Understanding and interpreting the various gauge reading equipment.

Demonstrating and understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation when:

- > Applying the inter-relatedness of the Lumber Milling industry as a set of related systems.
- > Recognizing the inter-relatedness between the various business units within the organization.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

- 1.1 The correct terminology is used to describe the various operations within the Lumber Milling processes.
- 1.2 Differences between the four sub disciplines of Lumber Milling Technology are given.
- 1.3 Different equipment is listed and differentiated in terms of use.
- 1.4 Different products are described in terms of the different operations.

Associated Assessment Criteria for Exit Level Outcome 2:

- 2.1 Elementary operations are described/ listed in terms of operations performed.
- 2.2 Safety precautions are adhered to during operation.
- 2.3 Correct equipment is used to carry out tasks.
- 2.4 Checks are performed on equipment before carrying out task.
- 2.5 Findings are reported according to company's procedures.
- 2.6 Equipment is operated according to standard operating procedures.
- 2.7 Basic maintenance is performed on equipment (lubrication).
- 2.8 Equipment is cleaned after use.

Associated Assessment Criteria for Exit Level Outcome 3:

- 3.1 Occupational health, safety and environmental legislation applicable to the Lumber Milling Industry is understood and applied correctly at all times as per workplace requirements.
- 3.2 First Aid is administered appropriately and requisite reporting takes place.
- 3.3 Potential hazards are identified as per standard operating standards and norms.
- 3.4 Safety, health and environment related activities are conducted in the Lumber Milling environment and according to Occupational Health, Safety and Environmental requirements.

Associated Assessment Criteria for Exit Level Outcome 4:

- 4.1 Quality requirements are listed.
- 4.2 The products (boards, planks) are graded according to prescribed quality standards.
- 4.3 Products are cut according to company's specifications.
- 4.4 The importance of adherence to quality requirements is explained according to industry standardization.
- 4.5 The consequences of poor quality products on the business are given.

Associated Assessment Criteria for Exit Level Outcome 5:

- 5.1 Correct equipment is identified in terms of work at hand.
- 5.2 The use of equipment is explained.

5.3 Equipment is gathered in terms of operation to be carried out.

5.4 Equipment is operated safely.

5.5 Equipment is cleaned and maintained as per specifications.

5.6 Equipment is stored accordingly.

Integrated Assessment:

Integrated assessment evaluates the learner's ability to combine actions and ideas across a range of activities and knowledge areas. The integrated assessment must specifically assess the learner's ability to:

- > Demonstrate competence by means of the practical application of the embedded knowledge in a manner that meets the required performance standards required.
- > Illustrate a clear understanding of the concepts, theory and principles that underpin the practical action taken.

The assessment will require assessment methods which measure and evaluate evidence generated during learning and on-the-job activities. Because assessment practices must be open and transparent, fair, valid and reliable; ensuring that no learner is disadvantaged in any way whatsoever, an integrated assessment approach is incorporated into the Qualification.

A variety of methods must be used in assessment tools and activities must be appropriate to the context in which the learner is working or will work. Where it is not possible to assess the learner at the workplace, simulations, case studies role plays and other similar techniques should be used to provide a context appropriate to the assessment.

The term integrated assessment implies that theoretical and practical components should be assessed together. Whenever possible, the assessment of knowledge, skills, attitudes and values shown in the Unit Standards should be integrated and, during integrated assessment, the assessor should make use of a range of formative and summative assessment tools and methods. Combinations of practical, applied, foundational and reflective competencies should be assessed. Assessment should further ensure that all specific outcomes, embedded knowledge and critical cross field outcomes are evaluated in an integrated way.

Assessors must assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience as the assessment process is capable of being applied to RPL, subject to the rules and criteria of the relevant ETQA.

INTERNATIONAL COMPARABILITY

The following countries were considered for their best practices in Wood Processing and also for their similarities and differences to the South African model:

- > New Zealand.
- > Canada.
- > USA.
- > Britain.

New Zealand:

Saw Doctoring:

The Qualification recognises the skills and knowledge required for the care and maintenance of handsaws, circular saws, and band saws. It is recommended that candidates should hold a current first aid certificate or are credited with the first aid standards - Unit 6400, Manage first aid

in emergency situations; Unit 6401, Provide first aid; and Unit 6402, Provide resuscitation Level 2.

Topics Covered:

- > Demonstrate knowledge of safety on engineering worksites.
- > Apply safe working practices on an engineering worksite.
- > Safely shut down and isolate machines and equipment.
- > Set circular saws.
- > Maintain household and handy person cutting tools.
- > Demonstrate knowledge of grinding for saw doctoring, timber machining and finger jointing.
- > Tooth circular saws.
- > Demonstrate knowledge of saw tooth profiles in saw doctoring.
- > Demonstrate knowledge of saw grinder application and operation.
- > Perform basic saw doctoring calculations.
- > Demonstrate knowledge of the principles of saw doctoring.
- > Identify and describe workplace risks in a wood manufacturing operation.
- > Sharpen band saws.
- > Sharpen circular saws.
- > Select, use and care for, engineering hand tools.
- > Maintain handsaws.
- > Maintain narrow handsaws.
- > Grind and hone straight knives and anvils.
- > Maintain a chainsaw chain and bar.
- > Maintain metal cutting saw.
- > Tip circular saw teeth and profile circular saw tips.
- > Retooth inserted teeth saws.
- > Tooth band saws.
- > Maintain router bits and drill bits.

This qualification compares favourably with the South African Qualification at NQF Level 2 and 3 in the following:

- > Level of Unit Standards is the same.
- > Number of credits are the same.

Although the qualification is at Level 2, a few competencies in the qualification are expected to be demonstrated by a learner qualifying at the level 1 within the SA context. These are:

- > Demonstrate knowledge of safety on engineering worksites.
- > Apply safe working practices on an engineering worksite.
- > Safely shut down and isolate machines and equipment.
- > Set circular saws.
- > Maintain household and handyperson cutting tools.

Block stack timber Level 1, with 2 credits is also found in the SA Qualification (Lumber Dry area of specialisation).

Due to the fact that Level 1 Qualification offers little specialisation, competencies in all the four areas of specialisation are very minimal, therefore the rest of saw doctoring unit standards listed below, do not form part of the SA Level 1 qualification.

National Certificate in Solid Wood Manufacturing (Level 3) with strands in Engineered Wood Product Operations; Laminated Veneer Lumber (LVL) and Plywood Operations; Planer Operations; Pole and Post Operations; Saw Centre Operations; Timber Drying Operations;

Timber Grading Operations; Timber Treatment Operations; Veneer Preparation; and Wood Product Operations.

Core Skills:

- > Demonstrate knowledge of environmental issues in Wood Manufacturing Industries.
- > Demonstrate knowledge of business basics in a wood manufacturing industry.
- > Take and record measurements and make calculations in wood manufacturing.
- > Demonstrate knowledge of systems and techniques used when working efficiently in wood manufacturing industry.
- > Describe process techniques used on a wood manufacturing worksites.
- > Participate, with technical support, in the investigation of wood manufacturing production issues.
- > Applications of workplace health and safety principles in the wood manufacturing industries.

Core Elective:

Apply hazard identification and risk assessment procedures in the workplace:

- > Explain adhesive use in wood product manufacturing.
- > Carry out procedures for gluing in wood product manufacturing.

Finger Jointing:

- > Feed and tail out finger jointer.
- > Test finger jointed product in solid wood manufacturing.

Operate cross cut saw centre:

Lamination:

- > Laminate straight timber for wood product manufacturing.
- > Test laminated product in wood product manufacturing.
- > Control automatic glue mixing systems for wood product manufacturing.
- > Develop patterns and construct jigs for curved laminate products in wood product manufacturing.
- > Laminate curved products for wood product manufacturing.
- > Store and handle chemicals for energy and chemical plant.

Machinery:

- > Set up a timber planer for dress four sides.
- > Joint straight cutters.
- > Set cutters into cutter heads.

The following competencies have been identified as being similar to the proposed qualification in that they cover the same level for the target group:

- > Health, safety and Environmental issues are covered important in both qualifications.
- > Demonstrate knowledge of environmental issues in wood manufacturing industries.
- > Explain adhesive use in wood product manufacturing.

The difference with this model is that the qualification is well structured and detailed in terms of competencies compared to the South African one. The following are not offered in the SA Level 3 qualification:

- > Demonstrate knowledge of business basics in a wood manufacturing industry.
- > Take and record measurements and make calculations in wood manufacturing.
- > Demonstrate knowledge of systems and techniques used to work efficiently in wood manufacturing.

Application of Glue, handling and storage of glue is done by an operator in a Level 2 qualification.

Canada:

Canada does not offer full qualification however, it should be noted that the Short Courses they offer, are similar in depth and breadth to the South African model. The notional hours and the number of credits are evident. The Body of knowledge titled: safety operation of machinery (BP-WW2-05-01). Identifying Safety Risks in Wood Processing and Precautions for Specific Equipment(equipment used to process wood waste (rolling stock, conveyors, screens, hogs/shredder) Other Wood Processing Machine Operators (NOC_9434). Other Wood Processing Machine Operators 212 are adequately covered in the South African model. The following shows the structure of the Unit Standards covered:

- > Introduction and Overview.
- > Sawmilling, Then and Now.
- > Product Recovery Factors.
- > Sawmill Economics - 101.
- > Lumber Grades.
- > Log Merchandising.
- > Debarking.
- > Large Log Processing.
- > Small Log Processing.
- > Sawfiling Practices.
- > Edging.
- > Resawing.
- > Lumber Trimming and Sorting.
- > Mill/Plant Layout and Design.
- > Lumber Drying.
- > Planing and Grading.
- > Lumber Quality and Process Control.
- > Human Resources.
- > Business Aspects of Manufacturing.

We also noted that other form of specialisation available for training includes:

- > Wood Technology.
- > Timber Grading (NZ, USA, Australian grading rules), and this includes the following Units:
 - > Kiln Drying, Wood Drying, Sawmilling, Wood Preservation, Timber Yarding, and other technical aspects of the timber industry. A comparison to the South African model also shows that these are covered extensively as a learner progresses from one level to the other.

Due to restriction imposed by the scope and parameter of this qualification and its level, a detailed comparison could not be carried out. However, this qualification compares favourably with the South African model in that it covers at the same Level and the proposed competencies, knowledge and skills. Focus on Kiln drying, Wood drying processes, Green Timber processing (Saw Milling) Lumber Drying Processing (Wood Preservation) which is the same as outlined above.

Britain:

Source: National Learners' Records Database

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Certificate in Kiln Drying:

CAWP offers a 150-hour modular course in kiln drying that currently represents the most comprehensive training program on the subject available anywhere in the world. Qualifications from Britain are similar although learning programmes and hours of learning are comparable. The inclusion of labor legislation and other non-industry specific subjects make it even more uniquely South African. The institutions offering these qualification in Britain are all internationally recognized as centres of excellence in training and education in the Forestry/Wood Technology field.

Emerging Economies:

> In an attempt to do a comparison with a country with an emerging economy, no qualification exist.

ARTICULATION OPTIONS

This Qualification articulates both horizontally and vertically.

Horizontal articulation:

- > ID 64309: General Education and Training Certificate: Adult Basic Education and Training, Level 1.
- > ID 49552: General Education and Training Certificate: Environmental Practice, Level 1.
- > ID 49753: General Education and Training Certificate: General Technical Practice, Level 1.

Vertical articulation:

- > ID 61929: National Certificate: Pulp and Paper Operations, Level 2.

MODERATION OPTIONS

> Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with a relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

> Any institution offering learning that will enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA or with an ETQA that has a Memorandum of Understanding with relevant ETQA.

> Moderation of assessment will be overseen by the relevant ETQA or by an ETQA that has a Memorandum of Understanding with the relevant ETQA, according to the relevant ETQA's policies and guidelines for assessment and moderation.

> A learner wishing to be assessed for this qualification can only be assessed through an accredited assessment provider/centre.

> Moderation must include both internal and external moderation of assessments at exit points of the qualification, unless ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described both in individual Unit Standards as well as in the Exit Level Outcomes described in the Qualification.

> The Moderator for this qualification must have a similar qualification or that is at least one level higher than this qualification.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

Anyone assessing a learner against this qualification must be registered with the relevant ETQA as an assessor.

Any institution offering learning that will enable the achievement this qualification must be accredited as a provider with the relevant ETQA. Assessment will be overseen by the relevant ETQA according to the policies and guidelines for assessment of that ETQA, in terms of agreements reached around assessment and between various ETQA's (including professional bodies).

Anyone wishing to be assessed against this qualification may apply to be assessed any assessment agency, assessor or provider institution that is accredited by the relevant ETQA.

The options as listed above provide the opportunity to ensure that assessment and moderation can be transparent, affordable, valid reliable and non-discriminatory.

For an applicant to register as an assessor or moderator of this qualification, the applicant needs:

- > To be registered as an assessor with the relevant ETQA.
- > To be in possession of the relevant qualification.
- > To have sufficient relevant experience.
- > To have the appropriate qualification to assess communication and mathematical literacy.

NOTES

This qualification is designed to cover focus areas under four specializations in the Forestry industry which are:

- > Dry Lumber.
- > Lumber Drying processes.
- > Green Timber Processing.
- > Saw Doctoring.

The four focus areas of learning allowed for progression from Level 1-4 in each category. The new design allows for four qualifications namely, GETC: Lumber Milling, two National Certificates at Level 2 and 3 and an FETC: Lumber Milling with four specializations in each.

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119373	Describe and represent objects in terms of shape, space and measurement	Level 1	5
Fundamental	119635	Engage in a range of speaking/signing and listening interactions for a variety of purposes	Level 1	6
Fundamental	119364	Evaluate and solve data handling and probability problems within given contexts	Level 1	5
Fundamental	119631	Explore and use a variety of strategies to learn	Level 1	5
Fundamental	119640	Read/view and respond to a range of text types	Level 1	6
Fundamental	7450	Work with measurement in a variety of contexts	Level 1	2
Fundamental	119362	Work with numbers; operations with numbers and relationships between numbers	Level 1	4
Fundamental	119636	Write/Sign for a variety of different purposes	Level 1	6
Core	263684	Explain Lumber Milling Industry activities in terms of processes	Level 1	4
Core	263686	Identify the mechanical makeup and the function of elementary equipment needed in area of work	Level 1	4
Core	117226	Keep work area and equipment clean and safe in a wood products plant	Level 1	5
Core	263685	Perform elementary lumber milling operations	Level 1	15
Core	259639	Explain basic health and safety principles in and around the workplace	Level 2	4

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Core	244075	Maintain the quality of products in a production environment	Level 2	5
Core	259604	Verify compliance to safety, health and environmental requirements in the workplace	Level 2	4
Core	9322	Work in a team	Level 2	3
Elective	252250	Apply fire fighting techniques	Level 1	3
Elective	263654	Clean saws and cutters returned for maintenance in saw shop of lumber mill	Level 1	5
Elective	14656	Demonstrate an understanding of sexuality and sexually transmitted infections including HIV/AIDS	Level 1	5
Elective	13176	Describe and discuss basic issues relating to the nature of business, the stakeholders in a business and business profitability	Level 1	3
Elective	14445	Frame and implement an individual action plan to improve productivity within an organisational unit	Level 1	3
Elective	263681	Handle, mix and apply adhesive glue manually in finger-jointing and laminating facilities of lumber mill	Level 1	5
Elective	263682	Inspect used saw blades before and after servicing in saw shop of lumber mill	Level 1	2
Elective	243189	Manage personal finances	Level 1	8
Elective	263678	Manually set and sharpen springset saw blades used in lumber mill	Level 1	5
Elective	263655	Move/transport saws and cutters between saw shop and processing machines/areas in lumber mill	Level 1	5
Elective	116932	Operate a personal computer system	Level 1	3
Elective	263690	Operate log yard in a Lumber Mill	Level 1	4
Elective	263695	Perform routine maintenance on saw shop machines and tools in lumber mill	Level 1	2
Elective	263676	Prepare and load lumber drying kiln according to prescribed procedure	Level 1	5
Elective	263689	Stack lumber for kiln drying	Level 1	3
Elective	13172	Understand the employer/employee relationship	Level 1	3
Elective	263674	Describe drying defects occurring in wood, and methods to use in minimizing them	Level 2	5
Elective	12466	Explain the individual's role within business	Level 2	4
Elective	263696	Move kiln trolley with load of dried lumber from drying kiln to cooling shed/facilities	Level 2	2
Elective	120496	Provide risk-based primary emergency care/first aid in the workplace	Level 2	5

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Clean saws and cutters returned for maintenance in saw shop of lumber mill

SAQA US ID		UNIT STANDARD TITLE	
263654		Clean saws and cutters returned for maintenance in saw shop of lumber mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Explain the correct procedures to be followed for cleaning saw blades and cutters in the Saw Doctor Shop.

SPECIFIC OUTCOME 2

Explain at what point in the sequence of activities in the Saw Doctor Shop, saw blades and cutters are ready for cleaning.

SPECIFIC OUTCOME 3

Explain correctly the prescribed handling procedures regarding cleaning materials and aids used in the Saw Shop.

SPECIFIC OUTCOME 4

Clean saw blades and cutters correctly as prescribed.

SPECIFIC OUTCOME 5

Move saws and cutters to and from cleaning areas in the Saw Shop according to company's procedures.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Move/transport saws and cutters between saw shop and processing machines/areas in lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263655	Move/transport saws and cutters between saw shop and processing machines/areas in lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Explain the scheduling of the collection of used and the delivery of serviced saw blades and cutters in the Lumber Mill.

SPECIFIC OUTCOME 2

Explain how to identify used saw blades and cutters/knives at the work/holding areas of the Lumber Mill.

SPECIFIC OUTCOME 3

Explain the correct procedures used for moving saw blades and cutters between the Saw Mill and the Saw Shop.

SPECIFIC OUTCOME 4

Move/transport correctly saw blades and cutters/knives between the Saw Mill and the Saw Shop of the Lumber Mill.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Describe drying defects occurring in wood, and methods to use in minimizing them

SAQA US ID	UNIT STANDARD TITLE		
263674	Describe drying defects occurring in wood, and methods to use in minimizing them		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Describe the properties of wood that can cause drying defects.

SPECIFIC OUTCOME 2

Describe the lumber drying factors that can cause drying defects.

SPECIFIC OUTCOME 3

Describe methods and techniques required to minimize lumber kiln drying defects.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Prepare and load lumber drying kiln according to prescribed procedure

SAQA US ID	UNIT STANDARD TITLE		
263676	Prepare and load lumber drying kiln according to prescribed procedure		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Follow procedures to prepare the kiln to receive a load of lumber to dry.

SPECIFIC OUTCOME 2

Position the kiln trolley with load correctly to facilitate loading.

SPECIFIC OUTCOME 3

Apply load restraining devices, where relevant.

SPECIFIC OUTCOME 4

Load and position the trolley with load in a kiln and shut the kiln door.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Manually set and sharpen springset saw blades used in lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263678	Manually set and sharpen springset saw blades used in lumber mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Explain the differences between spring set and swage set saw blade teeth shapes used on saw blades in the Lumber Mill.

SPECIFIC OUTCOME 2

Explain the procedures used to manually set and sharpen spring set saw blades.

SPECIFIC OUTCOME 3

Explain the correct maintenance and adjustment of tools and equipment used to manually set and sharpen spring set saw blades.

SPECIFIC OUTCOME 4

Set and sharpen manually spring set saw blades.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Handle, mix and apply adhesive glue manually in finger-jointing and laminating facilities of lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263681	Handle, mix and apply adhesive glue manually in finger-jointing and laminating facilities of lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Handle and mix glue manually and deliver to designated work station.

SPECIFIC OUTCOME 2

Apply glue manually to finger-joint profiles in accordance with company's procedures.

SPECIFIC OUTCOME 3

Position laminates for efficient glue application.

SPECIFIC OUTCOME 4

Feed glue to glue spreader for application to laminates.

SPECIFIC OUTCOME 5

Position laminates in pressing jigs.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Inspect used saw blades before and afterservicing in saw shop of lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263682	Inspect used saw blades before and afterservicing in saw shop of lumber mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	2

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Explain how to identify damage and faults to used saw blades before and after cleaning in the Saw Shop of the Lumber Mill.

SPECIFIC OUTCOME 2

Explain the markings used to highlight damage and faults found on the saw blades.

SPECIFIC OUTCOME 3

Report damage and faults found on used saw blades.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Explain Lumber Milling Industry activities in terms of processes*

SAQA US ID	UNIT STANDARD TITLE		
263684	Explain Lumber Milling Industry activities in terms of processes		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	4

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Define the operations within each area of specialization.

SPECIFIC OUTCOME 2

Discuss the use of dry timber material in the Lumber Milling Industry.

SPECIFIC OUTCOME 3

List the different equipment used in the various operations within the Lumber Industry.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Perform elementary lumber milling operations

SAQA US ID	UNIT STANDARD TITLE		
263685	Perform elementary lumber milling operations		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	15

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Define activities taking place within the green timber processing in lumber milling.

SPECIFIC OUTCOME 2

Adherence to safety health standards in the primary log breakdown.

SPECIFIC OUTCOME 3

Define activities taking place during the process of drying lumber.

SPECIFIC OUTCOME 4

Adhere to health and safety standards applicable to dry mill.

SPECIFIC OUTCOME 5

Sort boards and planks according to set Industry regulations.

SPECIFIC OUTCOME 6

Define activities taking place within the dry lumber processing and saw doctoring.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Identify the mechanical makeup and the function of elementary equipment needed in area of work

SAQA US ID	UNIT STANDARD TITLE		
263686	Identify the mechanical makeup and the function of elementary equipment needed in area of work		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	4

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Distiguish the different parts of equipments and how they relate to each other.

SPECIFIC OUTCOME 2

Apply knowledge of functional usage of every part in the whole machinery system.

SPECIFIC OUTCOME 3

Handle the equipments according to Health and Safety standards as per manufacturer's specifications.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Stack lumber for kiln drying**

SAQA US ID	UNIT STANDARD TITLE		
263689	Stack lumber for kiln drying		
ORIGINATOR			PROVIDER
SGB Forestry			
FIELD			SUBFIELD
1 - Agriculture and Nature Conservation			Forestry and Wood Technology
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	3

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Sort planks from the green chain into the appropriate dimension classes.

SPECIFIC OUTCOME 2

Prepare stacking bay/mechanical stacking for the stacking process.

SPECIFIC OUTCOME 3

Prepare kiln trolley to receive planks/parcels of planks/stack.

SPECIFIC OUTCOME 4

Stack planks/boards for lumber drying as prescribed.

SPECIFIC OUTCOME 5

Place stickers to give appropriate support to each layer of planks.

SPECIFIC OUTCOME 6

Apply restraining devices to kiln load to minimise distortion of planks.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate log yard in a Lumber Mill

SAQA US ID	UNIT STANDARD TITLE		
263690	Operate log yard in a Lumber Mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	4

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Offload logs using the correct techniques onto the log receiving deck/offloading deck.

SPECIFIC OUTCOME 2

Sort logs and store using the correct tools and equipment into the correct log classes.

SPECIFIC OUTCOME 3

Feed sorted debarked logs into the Wet Mill in accordance with planned Wet Mill material requirements.

SPECIFIC OUTCOME 4

Keep records of logs received at and processed in the log yard (log tallying).

SPECIFIC OUTCOME 5

Logs are correctly recorded as they are received in the Wet Mill.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Perform routine maintenance on saw shop machines and tools in lumber mill

SAQA US ID		UNIT STANDARD TITLE	
263695		Perform routine maintenance on saw shop machines and tools in lumber mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 1	2

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Explain the routine maintenance/lubrication programme prescribed for the Saw Doctor shop facilities in the Lumber Mill.

SPECIFIC OUTCOME 2

Describe the tools and materials, and their functions, used for the routine maintenance/lubrication programme of the Saw Doctor shop facilities.

SPECIFIC OUTCOME 3

Explain the stores and inventory procedures of maintenance/lubrication items for Saw Doctor shop.

SPECIFIC OUTCOME 4

Perform the routine maintenance/lubrication programme for the Saw Doctor shop facilities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Move kiln trolley with load of dried lumber from drying kiln to cooling shed/facilities

SAQA US ID	UNIT STANDARD TITLE		
263696	Move kiln trolley with load of dried lumber from drying kiln to cooling shed/facilities		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	2

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Prepare the lumber drying kiln for removal of the trolley with stack of dried lumber.

SPECIFIC OUTCOME 2

Move trolley with dried lumber stack from kiln to cooling shed.

SPECIFIC OUTCOME 3

Park trolley with stack of dried lumber in cooling shed and remove the pulling equipment and the load restraining devices/weights (at the correct time) where relevant.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66269	General Education and Training Certificate: Lumber Milling	Level 1



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
National Certificate: Lumber Milling

SAQA QUAL ID		QUALIFICATION TITLE	
66312		National Certificate: Lumber Milling	
ORIGINATOR		PROVIDER	
SGB Forestry			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	1 - Agriculture and Nature Conservation	Forestry and Wood Technology	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	120	Level 2	Regular-Unit Stds Based

This qualification does not replace any other qualification and is not replaced by another qualification.

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

The purpose of this Qualification is to provide opportunity to learners to advance their learning in the Lumber Milling Industry.

This Qualification will allow learners to contribute to the economic growth of the industry in that they will be better positioned and skilled in their own area of specialisation which includes:

- > Green Timber Processing.
- > Lumber Drying.
- > Dry Lumber processing.
- > Saw doctoring.

The learners will also be exposed to mathematical literacy and computer literacy, which will permeate through to their specific knowledge fields, thus easing the application of skills required at this level.

Specifically, on completion of this qualification, learners will be able to:

- > Apply regulatory occupational safety, health and environmental practices.
- > Demonstrate an understanding of productivity requirement in the Dry Mill.
- > Operate machinery across the areas of specialisation within the Lumber Milling Industry according to set quality standards.
- > Apply the Quality Management Systems in Timber grading as outlined in the organisational policies.

Rationale:

South Africa has a need to create a skill pool of people who can apply the regulatory pieces of legislature which is earmarked for the sustainable development of the Forestry and the Environment. These include tools such as the framework regulating the Forest Management, Conserving the Environment whilst ensuring that safety principles are adhered to.

In the context above, the Wood and Forestry stakeholders need to increase the number of relevantly qualified and skilled people to undertake these tasks. The envisaged learners are workers who have been engaged in a similar environment and those who wish to join the industry. These learners, once qualified, will be able to effectively and efficiently work as operators on tasks they are responsible for at this level in the relevant workplace.

The benefits of this qualification will encompass sectors such as Water and Forestry, Department of Environmental Affairs and Tourism (DEAT), Department of Agriculture and Department of Trade and Industry.

In general, learners will:

- > Use machinery effectively.
- > Apply integrated knowledge of the products and chemicals and their impact on the environment.
- > Practice the elements and principles of Quality Management Systems.
- > Develop a sense of responsibility towards their work and environment.

Improved levels of knowledge and skills lead to greater ability to produce at more competitive costs and better quality, increased sales, greater profits, more personal income, which will impact favourably both on the society and the economy of the country.

This qualification supports the National Qualifications Framework regarding access, mobility and progression, quality of learning, redress of unfair discrimination and contribution to personal development and social and economic development of the nation.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED IN PLACE

- > Communication and Mathematical Literacy at NQF Level 1 or equivalent.

Recognition of Prior Learning:

This qualification may be achieved in part or wholly through recognition of prior learning (RPL) processes.

The provision that the qualification may be obtained through the recognition of prior learning facilitates access to an education, training and career path in engineering and thus accelerates the redress of past unfair discrimination in education, training and employment opportunities.

Evidence of prior learning must be assessed through formal RPL processes through recognized methods. Any other evidence of prior learning should be assessed through formal RPL processes to recognize achievement thereof.

Learners submitting themselves for RPL should be thoroughly briefed prior to the assessment and will be required to submit a Portfolio of Evidence (PoE) in the prescribed format to be assessed for formal recognition. While this is primarily a workplace-based qualification, evidence from other areas of learning may be introduced if pertinent to any of the Exit Level Outcomes (ELOs).

The structure of this unit standard based qualification makes the RPL possible, if the learner is able to demonstrate competence in the knowledge, skills, values and attitudes implicit in this qualification.

Learners who already work in the Lumber Milling industry who believe they possess competencies to enable them to meet some or all of the ELOs listed in the qualification will be able to present themselves for assessment against those of their choice.

Access to the Qualification:

Access to this qualification is open however, learners should have:

- > Completed the General Education and Training Certificate in Lumber Milling NQF Level 1 or equivalent.

QUALIFICATION RULES

The Qualification consists of Fundamental, Core and Elective Unit Standards. A minimum of 120 credits is required to achieve this Qualification. The credits are allocated as follows:

Fundamental Component:

- > The fundamental component of this Qualification consists of four Unit Standards in communication and four in mathematical literacy. All fundamental Unit Standards are compulsory for all the learners. The total number of credits in this component is 36 credits.

Core Component:

- > The core component consists of 4 Unit Standards and 26 credits. All the Unit Standards are compulsory for all the learners.

Elective Component:

- > There are four elective pathways; Lumber Drying; Dry Lumber processing; Saw Doctoring and Green Timber processing.

Note: Each of the specialization areas has a different number of credits. The minimum number of elective credits is 58. Therefore the balance of credits required to achieve this qualification must be selected from any of the other elective pathways.

Specialisation path 1: Dry Lumber Processing with 4 unit standards titles below:

- > Produce finger jointed lumber in lumber 3/6.

Specialisation path 2: Lumber Drying with 4 unit standards titles below:

- > ID 263720: Describe kiln types, construction materials and auxiliary equipment.
- > ID 263693: Select, prepare, produce and use samples in lumber drying process.
- > ID 263683: Describe basic principles of lumber kiln drying schedule.
- > ID 263674: Describe drying effect that can occur in wood, and methods and techniques to minimize them.

Specialisation path 3: Saw Doctoring with 8 unit standards titles below with 50 credits:

- > ID 263755: Use and care for grinding wheels, blade, knife and cutter maintenance in saw doctor shop of lumber mill.
- > ID 263723: Maintain and set up cutter blocks with profiled and disposable cutters.
- > ID 263724: Set up circular saw blade(s) in machines used for processing timber in lumber mill.
- > ID 263734: Weld saw blades using metal inert gas (MIG) and tungsten inert gas (TIG) in saw shop of lumber mill.
- > ID 263716: Hang frame saw blades and set up frame saw machine used in lumber mill.

- > ID 263691: Set up and sharpen swaged tooth saw blades used in the lumber mill.
- > ID 263715: Sharpen and set up knives and profile cutters used in lumber mill.
- > ID 263677: Weld and braze saw blades using oxygen/acetylene during maintenance in saw shop of lumber mill.

Specialisation path 4: Green Timber Processing with 5 unit standards titles below:

- > ID 263675: Operate and monitor the green chip production facilities in green timber processing area of lumber mill.
- > ID 263687: Operate green lumber edging facilities in green timber processing area of lumber mill.
- > ID 263679: Operate green lumber crosscutting trimming facilities in green timber processing area of lumber mill.
- > ID 263721: Operate log debarking facilities in green timber processing area of lumber mill.

EXIT LEVEL OUTCOMES

1. Operate equipment safely and carry out basic maintenance on machinery in a responsible manner.
2. Demonstrate an understanding of productivity requirements.
3. Explain the application of the Basic Conditions of Employment Act and its effect on earnings in own contract.
4. Perform duties assigned to as per standard operating procedures.
5. Identify potential hazards and critical safety issues in the workplace.
6. Demonstrate an understanding of the regulatory occupational safety, health and environmental practices.

Critical Cross-Field Outcomes have been addressed in the exit level outcomes as follows:

Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made when:

- > Identifying potential hazards in the workplace in relation to area of work.
- > Identifying productivity requirements.
- > Identifying lubrication equipment and methods of applying a lubricant.

Working effectively with others as a member of a group, organisation and community when:

- > Reporting findings to supervisor.
- > Communicating and receiving advice from supervisors.

Organising and managing oneself and one's activities responsibly and effectively when:

- > Performing work related task accordance with industry standard operating procedures.
- > Setting up machinery.
- > Identifying, minimizing and reporting potential occupational health and safety hazards and risks in the workplace.
- > Adhere to health and safety requirements in accordance with legislative requirements.

Collecting, analysing, organising and critically evaluating information to better understand and explain by:

- > Carrying out written instructions issued by supervisors, correctly and efficiently.
- > Interpreting and recording correct client contact details.

Communicating effectively using visual, mathematical and/or language skills in the modes of oral and/or written persuasion when:

- > Communicate with supervisor and client.
- > Evaluating and reporting problem situations to team members, other colleagues and clients.

Using science and technology effectively and critically, showing responsibility towards the environment and health of others when:

- > Lubricate equipment.
- > Understanding and interpreting the various gauge reading equipment.

Demonstrating and understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation when:

- > Applying the inter-relatedness of the Lumber Milling industry as a set of related systems.
- > Recognizing the inter-relationship between the various business units within the organization.

ASSOCIATED ASSESSMENT CRITERIA

Assessment Criteria for Exit Level Outcome 1:

- 1.1 Pre-checks are conducted as per standard operating procedures.
- 1.2 Findings are communicated to the relevant person.
- 1.3 Blades are changed as per company's procedures.
- 1.4 Machinery is lubricated according to manufactures specification.
- 1.5 Machinery is cleaned as per company's specification.
- 1.6 Equipment is operated according to company's procedures.

Assessment Criteria for Exit Level Outcome 2:

- 2.1 Productivity principles as applied to manufacturing processes are described.
- 2.2 Productivity practice in the workplace is described.
- 2.3 Knowledge of the importance of productivity improvement practices in the workplace is demonstrated.

Assessment Criteria for Exit Level Outcome 3:

- 3.1 Financial elements of an employment contract are explained.
- 3.2 Standard deductions reflected on a salary advice are interpreted.
- 3.3 The financial responsibilities that a company has to its employees are explained.
- 3.4 The responsibilities of the employee to her/his employer are explained.

Assessment Criteria for Exit Level Outcome 4:

- 4.1 Roles and responsibilities assigned to are explained to supervisor.
- 4.2 Tasks are performed within the prescribed time frame efficiently and effectively.
- 4.3 Quality requirements are adhered to at all times.
- 4.4 The necessary templates are completed as per requirements.
- 4.5 Written or verbal reporting is done as per standard operating procedures.

Assessment Criteria for Exit Level Outcome 5:

- 5.1 Safety rules related to the specific workplace are explained.
- 5.2 Safety signs and colour codes are recognised and interpreted.
- 5.3 Personal protective clothing and equipment for different situations are identified and described.
- 5.4 Potential hazards in the workplace are identified and prevention measures are described.
- 5.5 Learners role in maintaining a safe environment is described.
- 5.6 An appropriate response to injuries is demonstrated.

Assessment Criteria for Exit Level Outcome 6:

- 6.1 Knowledge of safe work requirements in the workplace is demonstrated.
- 6.2 Machines and equipment for safety compliance are inspected.
- 6.3 Knowledge of fire protection and prevention, fire fighting practices and emergency procedures is demonstrated.

Integrated Assessment:

Integrated assessment evaluates the learner's ability to combine actions and ideas across a range of activities and knowledge areas. The integrated assessment must specifically assess the learner's ability to:

- > Demonstrate competence by means of the practical application of the embedded knowledge in a manner that meets the required performance standards required.
- > Illustrate a clear understanding of the concepts, theory and principles that underpin the practical action taken.

The assessment will require assessment methods which measure and evaluate evidence generated during learning and on-the-job activities. Because assessment practices must be open and transparent, fair, valid and reliable; ensuring that no learner is disadvantaged in any way whatsoever, an integrated assessment approach is incorporated into the Qualification.

A variety of methods must be used in assessment tools and activities must be appropriate to the context in which the learner is working or will work. Where it is not possible to assess the learner at the workplace, simulations, case studies role plays and other similar techniques should be used to provide a context appropriate to the assessment.

The term integrated assessment implies that theoretical and practical components should be assessed together. Whenever possible, the assessment of knowledge, skills, attitudes and values shown in the Unit Standards should be integrated and, during integrated assessment, the assessor should make use of a range of formative and summative assessment tools and methods. Combinations of practical, applied, foundational and reflective competencies should be assessed. Assessment should further ensure that all specific outcomes, embedded knowledge and critical cross field outcomes are evaluated in an integrated way.

Assessors must assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience as the assessment process is capable of being applied to RPL, subject to the rules and criteria of the relevant ETQA.

INTERNATIONAL COMPARABILITY

Countries listed below were selected for their renowned excellence in the field of Wood processing.

- > New Zealand.
- > Canada.

> USA.

Saw Doctoring:

The Qualification recognises the skills and knowledge required for the care and maintenance of handsaws, circular saws, and bandsaws.

It is recommended that candidates should hold a current first aid certificate or are credited with the first aid standards - Unit 6400, Manage first aid in emergency situations; Unit 6401, Provide first aid; and Unit 6402, Provide resuscitation Level 2.

Topics Covered:

- > Demonstrate knowledge of safety on engineering worksites.
- > Apply safe working practices on an engineering worksite.
- > Safely shut down and isolate machines and equipment.
- > Set circular saws.
- > Maintain household and handyperson cutting tools.
- > Demonstrate knowledge of grinding for saw doctoring, timber machining and finger jointing.
- > Tooth circular saws.
- > Demonstrate knowledge of saw tooth profiles in saw doctoring.
- > Demonstrate knowledge of saw grinder application and operation.
- > Perform basic saw doctoring calculations.
- > Demonstrate knowledge of the principles of saw doctoring.
- > Identify and describe workplace risks in a wood manufacturing operation.
- > Sharpen bandsaws.
- > Sharpen circular saws.
- > Select, use and care for, engineering hand tools.
- > Maintain handsaws.
- > Maintain narrow bandsaws.
- > Grind and hone straight knives and anvils.
- > Maintain a chainsaw chain and bar.
- > Maintain metal cutting saw.
- > Tip circular saw teeth and profile circular saw tips.
- > Retooth inserted teeth saws.
- > Tooth bandsaws.
- > Maintain router bits and drill bits.

This qualification compares favourably with the South African Qualifications at NQF Level 2 and 3 in that the Unit Standards are pitched at the same level, and the number of credits are also the same.

However slight differences were noted wherein the South African Qualifications Level 2 and 3 in Saw Doctoring has been identified as a specialization area in the Lumber Milling Qualification whereas in New Zealand, it is offered as a stand alone Qualification. No emphasis on the need for First Aid as a requirement is mentioned on the New Zealand Qualification. Additionally, the competency below does not form part of the Saw Doctoring specialization area in both Level 2 and 3 Qualifications:

- > Perform basic saw doctoring calculations.
- > Set circular saws.
- > Maintain a chainsaw chain and bar.
- > Demonstrate knowledge of grinding for saw doctoring, timber machining and finger jointing.

Green Timber Processing:

Demonstrate knowledge of the principles of sawmilling, Level 2, 5 Credits.

Competencies:

- > Demonstrate knowledge of economic factors impacting on sawmill operations.
- > Demonstrate knowledge of principles of the sawmilling process.
- > Demonstrate knowledge of the concepts of timber conversion and grade recovery.
- > Describe safety requirements in the sawmill.

Demonstrate knowledge of the solid wood manufacturing industry, Level 2, 5 credits.

People credited with this unit standard are able to demonstrate knowledge of:

- > Solid wood manufacturing operations.
- > Markets for solid wood products.
- > Solid wood manufacturing key performance indicators.

SA Level 2 Qualification:

- > Markets for solid wood products.
- > Solid wood manufacturing key performance indicators.

Are not covered at level 2.

Additional unit standards:

Fillet timber for further processing, Level 2 with 3 credits:

- > National Certificate in Solid Wood Manufacturing (Level 3) with strands in Engineered Wood Product Operations; Laminated Veneer Lumber (LVL) and Plywood Operations; Planer Operations; Pole and Post Operations; Saw Centre Operations; Timber Drying Operations; Timber Grading Operations; Timber Treatment Operations; Veneer Preparation; and Wood Product Operations.

Core Skills:

- > Demonstrate knowledge of environmental issues in wood manufacturing industries.
- > Demonstrate knowledge of business basics in a wood manufacturing industry.
- > Take and record measurements and make calculations in wood manufacturing.
- > Demonstrate knowledge of systems and techniques used to work efficiently in wood manufacturing.
- > Describe process techniques used on a wood manufacturing worksite.
- > Participate, with technical support, in the investigation of wood manufacturing production issues.
- > Demonstrate knowledge of workplace health and safety in the wood manufacturing industries.

Core Elective:

Apply hazard identification and risk assessment procedures in the workplace:

- > Explain adhesive use in wood product manufacturing.
- > Carry out procedures for gluing in wood product manufacturing.

Finger Jointing:

- > Feed and tail out finger jointer.
- > Test finger jointed product in solid wood manufacturing.

Operate cross cut saw centre:

Lamination:

- > Laminate straight timber for wood product manufacturing.
- > Test laminated product in wood product manufacturing.
- > Control automatic glue mixing systems for wood product manufacturing.
- > Develop patterns and construct jigs for curved laminate products in wood product manufacturing.
- > Laminate curved products for wood product manufacturing.
- > Store and handle chemicals for energy and chemical plant.

Machinery:

- > Set up a timber planer for dress four sides.
- > Joint straight cutters.
- > Set cutters into cutterheads.

Similarities were identified within the Health, safety and Environmental Unit Standards which are also covered as important in both qualifications.

Research conducted on this qualification indicated that New Zealand's qualification is well structured and detailed in terms of competencies. This can be attested to the qualification rules as set out in their policy documents.

The following competencies do not form part of the South African Level 3 qualification: Demonstrate knowledge of business basics in a wood manufacturing industry, take and record measurements and make calculations in wood manufacturing, demonstrate knowledge of systems and techniques used to work efficiently in wood manufacturing, application of Glue, handling and storage of glue is done by an operator in a Level 2 qualification.

Canada:

Short Courses related to safety operation of machinery (BP-WW2-05-01).

Identifying Safety Risks in Wood Processing and Precautions for Specific Equipment (equipment used to process wood waste (rolling stock, conveyors, screens, and hogs/shredder).

Other Wood Processing Machine Operators (NOC_9434).

Other Wood Processing Machine Operators 212.

- > Introduction and Overview.
- > Sawmilling, Then and Now.
- > Product Recovery Factors.
- > Sawmill Economics - 101.
- > Lumber Grades.
- > Log Merchandising.
- > Debarking.
- > Large Log Processing.
- > Small Log Processing.
- > Sawfiling Practices.

- > Edging.
- > Resawing.
- > Lumber Trimming and Sorting.
- > Mill/Plant Layout and Design.
- > Lumber Drying.
- > Planing and Grading.
- > Lumber Quality and Process Control.
- > Human Resources.
- > Business Aspects of Manufacturing.

Wood wise LTD: Wood Industry Skills Education.

Specialised training in:

- > Wood Technology, Timber Grading (NZ, USA, Australian grading rules).

Topics:

- > Kiln Drying, Wood Drying, Sawmilling, Wood Preservation, Timber Yarding, and other technical aspects of the timber industry.

This learning programme has similar feature to the South African one in that it also focuses Kiln drying, Wood drying processes, Green Timber processing (Saw Milling) Lumber Drying Processing (Wood Preservation) Due to lack of subject matter content, a detailed comparison could not be carried out.

University of British Columbia: Centre for Advanced Wood Processing:

UBC Certificate in Kiln Drying:

CAWP offers a 150-hour modular course in kiln drying that currently represents the most comprehensive training program on the subject available anywhere in the world.

Other sites visited:

- > The British Columbia Institute for Technology, Vancouver Canada.
- > The community college at Ashville in North Caroline, U.S.A.
- > The Forestry Training Centre at Rotorua, New Zealand.
- > The Technical and Further Education (TAFE) training institute in Mt Gambier, Australia influenced the thinking on this and other Wood Technology qualifications.

Qualifications from those institutions and these are not exactly the same but learning programmes and hours of learning are comparable. The inclusion of labor legislation and other non-industry specific subjects make it even more uniquely South African.

The institutions listed above are all internationally recognized as centres of excellence in training and education in the Forestry/Wood Technology field.

Emerging Economies:

- > In an attempt to do a comparison with a country with an emerging economy, the, this qualification could not be found as existing in the SADC.

ARTICULATION OPTIONS

Upon completion of this Qualification, the learner will articulate horizontally to:

- > ID 48961: National Certificate: Construction: Crane Operation, NQF Level 2.

This Qualification articulates vertically to:

- > ID 50062: National Certificate: Occupational Hygiene and Safety, NQF Level 3.
- > National Certificate: Construction and Roofing, FET Phase, NQF Level 3.
- > ID 22670: National Certificate: Construction Carpentry, NQF Level 3.
- > ID 49080: National Certificate: Construction: Advanced Crane Operations, NQF Level 3.

MODERATION OPTIONS

> Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with a relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

> Any institution offering learning that will enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA or with an ETQA that has a Memorandum of Understanding with relevant ETQA.

> Moderation of assessment will be overseen by the relevant ETQA or by an ETQA that has a Memorandum of Understanding with the relevant ETQA, according to the relevant ETQA's policies and guidelines for assessment and moderation.

> A learner wishing to be assessed for this qualification can only be assessed through an accredited assessment provider/centre.

> Moderation must include both internal and external moderation of assessments at exit points of the qualification, unless ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described both in individual Unit Standards as well as in the Exit Level Outcomes described in the Qualification.

> The Moderator for this qualification must have a similar qualification or that is at least one level higher than this qualification.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

For an applicant to register as an assessor or moderator of this qualification, the applicant needs:

- > To be registered as an assessor with the relevant ETQA.
- > To be in possession of the relevant qualification above the level of this qualification.
- > To have sufficient relevant experience in the field of Lumber Milling.

NOTES

N/A

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	9009	Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems	Level 2	3
Fundamental	12461	Communicate at work	Level 2	5
Fundamental	7480	Demonstrate understanding of rational and irrational numbers and number systems	Level 2	3
Fundamental	119454	Maintain and adapt oral/signed communication	Level 2	5
Fundamental	12444	Measure, estimate and calculate physical quantities and explore, describe and represent geometrical relationships in 2-dimensions in different life or workplace contexts	Level 2	3
Fundamental	119464	Respond to literary texts	Level 2	5

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	7469	Use mathematics to investigate and monitor the financial aspects of personal and community life	Level 2	2
Fundamental	9007	Work with a range of patterns and functions and solve problems	Level 2	5
Fundamental	119456	Write/present for a defined context	Level 2	5
Core	13167	Identify potential hazards and critical safety issues in the workplace	Level 1	2
Core	243688	Demonstrate an understanding of productivity requirements	Level 2	10
Core	243701	Demonstrate an understanding of the regulatory occupational safety, health and environmental practices	Level 2	12
Core	113915	Explain the application of the basic conditions of employment act in an employment contract	Level 3	2
Elective	243189	Manage personal finances	Level 1	8
Elective	116932	Operate a personal computer system	Level 1	3
Elective	259619	Conduct workplace Occupational Health and Safety (OHS) inspections	Level 2	3
Elective	263683	Describe basic principles of a lumber kiln drying schedule	Level 2	7
Elective	263674	Describe drying defects occurring in wood, and methods to use in minimizing them	Level 2	5
Elective	263757	Describe kiln types, construction materials for kilns, and auxiliary equipment	Level 2	5
Elective	12466	Explain the individual's role within business	Level 2	4
Elective	263716	Hang frame saw blades and set up frame saw machine used in lumber mill	Level 2	5
Elective	263723	Maintain and set up cutter blocks with profiled and disposable cutters for machines used in Lumber Mill	Level 2	3
Elective	263675	Operate and monitor the green chip production facilities in green timber processing area of lumber mill	Level 2	3
Elective	263679	Operate green lumber crosscutting/trimming facilities in green timber processing area of lumber mill	Level 2	5
Elective	263687	Operate green lumber edging facilities in green timber processing area of lumber mill	Level 2	5
Elective	263721	Operate log debarking facilities in green timber processing area of lumber mill	Level 2	5
Elective	263693	Select, prepare, place and use samples in lumber drying process	Level 2	5
Elective	263691	Set and sharpen swaged tooth saw blades used in the lumber mill	Level 2	5
Elective	263724	Set up circular saw blade(s) in machines used for processing timber in lumber mill	Level 2	2
Elective	263715	Sharpen and set up knives and profile cutters used in Lumber Mill	Level 2	4
Elective	263755	Use and care for grinding wheels, blade, knife and cutter, maintenance in saw doctor shop of lumber mill	Level 2	5
Elective	263677	Weld and braze saw blades using oxygen/acetylene during maintenance in saw shop of lumber mill	Level 2	10
Elective	263734	Weld saw Blades using Metal Inert Gas (MIG) and Tungsten Inert Gas (TIG), in Saw Shop of Lumber Mill	Level 2	5
Elective	263720	Describe lumber drying kiln types, their construction materials and auxiliary equipment	Level 3	5
Elective	117171	Manage time effectively to enhance productivity and enable a balanced lifestyle	Level 3	2
Elective	263726	Produce finger-jointed lumber in lumber mill	Level 3	6
Elective	114978	Use a word processing package to produce business documents	Level 3	3

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION**None**



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate and monitor the green chip production facilities in green timber processing area of lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263675	Operate and monitor the green chip production facilities in green timber processing area of lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	3

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Assemble tools, equipment and cutting tools for the chipping green lumber.

SPECIFIC OUTCOME 2

Operate the green lumber chipping equipment and install the required cutting tools, to prescribed standards, in the prescribed manner.

SPECIFIC OUTCOME 3

Operate the chipping equipment in the prescribed manner.

SPECIFIC OUTCOME 4

Monitor the throughput and quality to maintain prescribed standards.

SPECIFIC OUTCOME 5

Carry out basic routine maintenance and lubrication of chip production and ancillary handling equipment.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Weld and braze saw blades using oxygen/acetylene during maintenance in saw shop of lumber mill

SAQA US ID		UNIT STANDARD TITLE	
263677		Weld and braze saw blades using oxygen/acetylene during maintenance in saw shop of lumber mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	10

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Explain the materials and equipment used with oxygen/acetylene to weld and braze saw blades.

SPECIFIC OUTCOME 2

Explain the procedures to be followed when welding and brazing using oxygen/acetylene in the saw shop.

SPECIFIC OUTCOME 3

Weld and braze saw blades using oxygen/acetylene in the saw shop.

SPECIFIC OUTCOME 4

Clean the faces and edges after welding saw blades using oxygen/acetylene.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate green lumber crosscutting/trimming facilities in green timber processing area of lumber mill

SAQA US ID	UNIT STANDARD TITLE		
263679	Operate green lumber crosscutting/trimming facilities in green timber processing area of lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Collect all the prescribed setting up tools and equipment and cutting tools for the crosscutting green lumber.

SPECIFIC OUTCOME 2

Set up the green lumber crosscutting equipment and install the required cutting tools, to prescribed standards, in the prescribed manner (Green lumber = board, flitch, slab).

SPECIFIC OUTCOME 3

Operate the crosscutting equipment in the prescribed manner to produce lumber of the prescribed lengths.

SPECIFIC OUTCOME 4

Carry out prescribed routine maintenance and lubrication of board crosscutting and ancillary handling equipment.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Describe basic principles of a lumber kiln drying schedule*

SAQA US ID	UNIT STANDARD TITLE		
263683	Describe basic principles of a lumber kiln drying schedule		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	7

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Explain the basic factors that must be taken into consideration in a kiln drying schedule.

SPECIFIC OUTCOME 2

Explain types of kiln drying schedules.

SPECIFIC OUTCOME 3

Describe the stages of a kiln drying schedule.

SPECIFIC OUTCOME 4

Explain the process of determining drying rate and end point of drying cycle.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Operate green lumber edging facilities in green timber processing area of lumber mill

SAQA US ID		UNIT STANDARD TITLE	
263687		Operate green lumber edging facilities in green timber processing area of lumber mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Collect all the prescribed setting up tools and equipment and cutting tools (blades, knives) for the green lumber edging.

SPECIFIC OUTCOME 2

Set up the green lumber edging equipment and install the required cutting tools, to prescribed standards, in the prescribed manner.

SPECIFIC OUTCOME 3

Operate the board edging equipment in the prescribed manner to produce lumber of the prescribed width.

SPECIFIC OUTCOME 4

Control the throughput and quality to maintain prescribed standards.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2
Elective	66329	National Certificate: Lumber Milling	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Set and sharpen swaged tooth saw blades used in the lumber mill***

SAQA US ID		UNIT STANDARD TITLE	
263691		Set and sharpen swaged tooth saw blades used in the lumber mill	
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Explain the procedures used to set and sharpen swaged tooth saw blades used in the Lumber Mill.

SPECIFIC OUTCOME 2

Explain the set up and adjustment of tools and equipment used to set and sharpen swaged tooth saw blades used in the Lumber Mill.

SPECIFIC OUTCOME 3

Set and sharpen swaged tooth saw blades using manually operated and automated machines and tools in the saw shop of the Lumber Mill.

SPECIFIC OUTCOME 4

Explain the prescribed maintenance and adjustment of tools and equipment used to set and sharpen swaged tooth set saw blades.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Select, prepare, place and use samples in lumber drying process

SAQA US ID	UNIT STANDARD TITLE		
263693	Select, prepare, place and use samples in lumber drying process		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Collect kiln drying samples which will be representative in number and appearance to the total number of planks in a kiln stack.

SPECIFIC OUTCOME 2

Prepare samples for placement in the kiln stack to be dried.

SPECIFIC OUTCOME 3

Place samples in the correct positions in the stack, and connect to moisture content monitors where relevant.

SPECIFIC OUTCOME 4

Determine moisture content accurately at the relevant times.

SPECIFIC OUTCOME 5

Record kiln sample data correctly.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Sharpen and set up knives and profile cutters used in Lumber Mill***

SAQA US ID	UNIT STANDARD TITLE		
263715	Sharpen and set up knives and profile cutters used in Lumber Mill		
ORIGINATOR	PROVIDER		
SGB Forestry			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Forestry and Wood Technology		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Explain the inspections carried out on used/blunt knives and profile cutters used in the Lumber Mill.

SPECIFIC OUTCOME 2

Assemble knife and profile cutter grinding machines in the Saw Shop.

SPECIFIC OUTCOME 3

Sharpen knives and profile cutters using the appropriate grinding machines in the Saw Shop.

SPECIFIC OUTCOME 4

Put knives and cutters in cutter blocks after sharpening.

SPECIFIC OUTCOME 5

Carry out the routine maintenance of the knife and profile cutter grinding machines used in the Saw Shop.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Hang frame saw blades and set up frame saw machine used in lumber mill***

SAQA US ID	UNIT STANDARD TITLE		
263716	Hang frame saw blades and set up frame saw machine used in lumber mill		
ORIGINATOR		PROVIDER	
SGB Forestry			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Forestry and Wood Technology	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Describe the tools, gauges and equipment used to set up/hang a set of frame saw blades in a frame saw machine used in the Lumber Mill.

SPECIFIC OUTCOME 2

Hang a set of frame saw blades in a frame saw machine according to company's procedures.

SPECIFIC OUTCOME 3

Check the alignment of blades after hanging in a frame saw machine.

SPECIFIC OUTCOME 4

Check the condition of all tools and gauges used to control the set up of a frame saw machine used in the Lumber Mill.

SPECIFIC OUTCOME 5

Check the condition of the important frame saw machine parts.

SPECIFIC OUTCOME 6

Check the timing of operating sequences on automatic frame saw machines.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	66312	National Certificate: Lumber Milling	Level 2